

Kites in Polynesia: Replicative Experiments and Hawaiian Petroglyphs

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Kites and the flying of kites were important in Polynesia. In New Zealand, kites were not only for play but were used in ritualistic magic, being flown for divination purposes by priests (Barrow 1984:103), and it is said that Tawhaki ascended into the sky world by means of a kite. In Mangaia (Cook Islands), the god Rongo was the patron of kite flying (Poignant 1967:66). Similar stories are found elsewhere in Polynesia, and kites made of *tapa* cloth with painted bird heads (*manu hakarere*) are cited from Easter Island (Métreaux 1971:353).

In Tahiti, kites were used to propel rafts. Haddon and Hornell (1975:143) mention a story about the district of Vairao in Tahiti which had a debt of revenge to pay to the people of Varai (now Papeari), a village across a broad bay. They loaded rafts with food and sent them across the bay by means of kites. This was ostensibly a gift, but in reality it was intended to lead the Papeari people to return the compliment by coming unarmed to Vairao with a return gift. The ruse succeeded and the people of Vairao had their revenge.

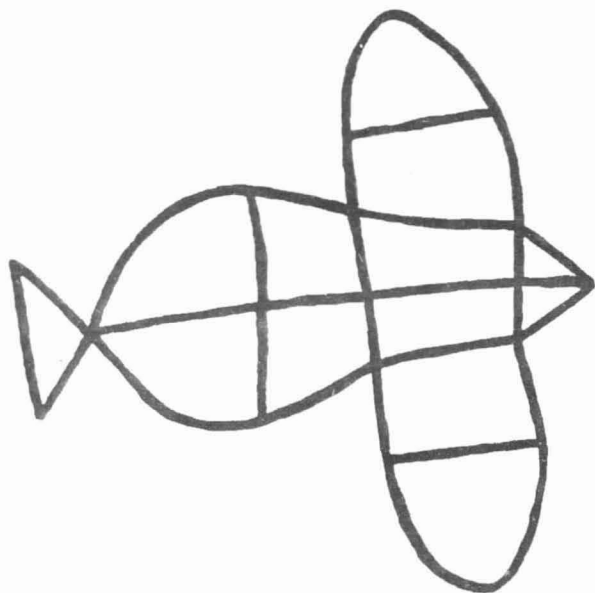


Figure 1. Drawing of a kite petroglyph recorded at Ka'upulehu, Hawai'i Island (138x138 cm). This motif is one of two kites noted for this site; other kite images are found at Puakō and in the Kaū area (Lee and Stasack, n.d.).

The use of kites as a means of propelling rafts was noted also by Corney (1915:324): "Kites have been used for towing rafts of timber and bamboo at this part of the coast—Mataeai and Papeari." In regard to kites, many men were involved in maintaining them in flight (Henry 1962:279) and it is mentioned that their sizes were "... of truly large dimension ... their manipulation undoubtedly posed no difficulty in the sea for the masters of the knowledge and use of winds" (Guiot 1995:21). The use of kites in traditional navigation is equally demonstrated by a legend concerning the double canoe of Māui which was pulled by a kite (Poignant 1969:66). Although little research has

been conducted regarding Polynesian kites, their use may have been over a wide area: Bidault (1945:73) mentions kites made from braided palm leaves that were used to propel bamboo rafts in the Banda Sea (southeast of Indonesia).

Probably because of their fragile nature, the only known extant kite is one from New Zealand (Poignant 1967), now in an Auckland museum. Early missionaries mention kite flying by Tahitians as one of the "useless" diversions practiced by the natives, and one they stamped out.

Thus it was exciting to find images of kites in the petroglyphs of Hawai'i Island (Figure 1). Only four sites (all on the Big Island) have them: Puakō, Ka'upulehu and two sites in the Kaū area (Lee and Stasack n.d.).

Hawaiian legends concerning the demi-god Māui include one about kite flying as a way to demonstrate control of the wind, or as a means of reaching the heavens to ensnare the souls of those who have done evil. The Hawaiian god Lo-lupe was shaped like a stingray—*hīhimanu* in Hawaiian (Beckwith 1970:109, 121); thus kites were stretched on a frame in the shape of a fish with wings, tail, etc. Lo-lupe took charge of those who spoke ill of the king and consigned them to death while the souls of those who were not guilty were taken to safety.

A legend tells how a grandfather showed Māui how to fashion a bird-shaped ship [a kite] out of feathers, *ti* leaves and 'ie 'ie vines so that he could fly through the air to Moana-liha. In another story, a person called Kawelo angered his fellows by outdoing Kauahoa in managing toy boats and kite flying. The place where he defeated Kauahoa is called Ka-ho'oleina-a-pe'a (the kite caused to fall) (Beckwith 1970:109, 121, 233, 407).

Westervelt relates the following legends:

"Maui called for the priest who had charge of the winds to open his calabash and let them come up to Hilo and blow along the Wailuku river. The natives say that the place where Maui stood was marked by the pressure of his feet in the lava rocks of the river bank as he braced himself to hold the kite against the increasing force of the winds which pushed it towards the sky. Then the enthusiasm of kite flying filled his youthful soul and he cried aloud, screaming his challenge along the coast of the sea toward Waipio—

*"O winds, winds of Waipio
In the calabash of Kaleioku,
Come from the ipu-makani,
O wind, the wind of Hilo,
Come quickly, come with power."*

(Westervelt 1910:116)

And,

"Maui soon learned the power of his kite when blown upon by a fierce wind. With his accustomed skill he planned to make use of his strong servant, and therefore took the kite with him on his journeys to the other islands, using it to aid in making swift voyages. With the wind in the right direction, the kite could pull his double canoe very easily and quickly to its destination." (ibid.:118).

In Hawai'i, the kite had two meanings. Some folk customs pointed to the dread of death. Children should fly kites only in open spaces and never at night. The belief was that Death might seize the kite and thereby claim the youngster (Pukui 1972:147). A kite that flew high, unimpeded and untangled, meant wealth, fame, or attainment (Pukui 1979: 180). Pukui's Proverb No. 1226 says, "It is the tail that makes the kite fly"—meaning that it is the number of followers that raises the prestige of the chief (Pukui 1983:133).

Inspired by the kite motifs in Hawaiian petroglyphs, I have been attempting to construct and fly a kite, basing the design on petroglyph motifs found at sites on the Big Island. (Figure 2). My kite is named *Pinao* (dragonfly), and I tried to use the materials the Hawaiians of old may have used in their construction: a *hau* frame augmented with some bamboo and tied together with silk string. I worked under the assumption that if it is a kite of ancient design, material and size, it must have been able to fly. The kites of old would have been much heavier because their covering would have been either tapa or *lauhala* (I used light cloth) (Figure 3), and their line would have been cordage of *olonā* or sennit (I used fishing silk line); the frame would have been tied together with *olonā* or sennit (Krauss 1993:89).

Following some trial flights, my experiment revealed that *Pinao* flies pretty well, particularly after finding—like everything in this world—its BALANCE. I fixed a small break on the wing that *Pinao* sustained on its maiden voyage (and first



Figure 2. In this photo the kite frame construction details can be clearly seen by its shadow on the ground. Compare to the kite petroglyph in Figure 1.

nose-dive crash). I'm glad I put in that long nose-to-tail longitudinal piece to hold it all together in case of an event like that! (Figure 4).

It's not easy to get out and fly a big kite. In reality, it's hard to find a person who wants to "go fly a kite" with me. They think I'm crazy! The weight of the kite has to be reckoned with: it is so large (five feet from nose-to-tail with a four foot wing-span), and relatively heavy (two pounds), that it is not easy to handle. I wish I could handle it by myself but someone has to "launch" it while another person hangs onto the line. Did the Polynesians of old have the problems I had?

The wind has to be strong and steady. I may have to go to some place like the Pali or Haleakala where the wind is steady. But did the Hawaiians do that? And for what reason? I found

that any short "lull" in the wind made the difference between flying or crashing. The kite did not respond to the whims of the wind and did not catch flight easily after "losing it." Again, I think this had to also do with the weight and, ultimately, balance. The basic shape of the kite makes it unsteady. With this



Figure 3. Bud Henry with a version of his kite, *Pinao*.

in mind, I attached three tails to the kite at the onset, one on each wing tip and one from the tail. But this did not stabilize it. I had that idea from my diamond-shaped Marquesan kite that Dr. Yosi Sinoto, senior anthropologist at the Bernice P. Bishop Museum,



Figure 4. The *Pinao* in flight at Kualoa Park. Finding the kite's balance was the key to stability.

and I experimented with at Ua Huka in the Marquesas last May. The experiment worked—but then the diamond-shape is inherently balanced.

I made tails from strips of an old sheet, tied together; each was about twenty feet long. I ended up using only one, attached to the tail. Balance was the key; otherwise it swung like a pendulum and failed to gain altitude. It just went back and forth sideways, and up and down, not gaining more than a ten to fifteen percent height angle. If the wind faltered for a few seconds, it dropped to the ground—flat—and that was O.K., because it didn't break. After I got down to the business of finding what I thought was the optimum true balance point, it flew more steadily and reached an altitude of around seventy-five feet. I was elated! Finally, because of the weight and instability, it took a nose-dive and came straight down towards me on its pointed nose.

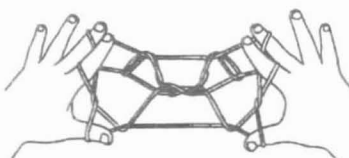
I have since fixed *Pinau's* wing and when conditions are right, it flies pretty well. We've had some steady, strong winds lately and I've found a person who wants to *ho'okele lupe* (fly a kite) with me. I'll bet that the Hawaiians of old had as much fun flying a kite as I am having.

REFERENCES

- Barrow, Terence. 1984. *An Illustrated Guide to Maori Art*. University of Hawaii Press.
- Beckwith, Martha. 1970. *Hawaiian Mythology*. University of Hawaii Press, Reprint.
- Bidault, J. 1945. *Pirogues et Pagaies*. Paris.
- Corney, B. G. 1915. *The Quest and Occupation of Tahiti by Emisaries of Spain during the Years 1772-1776*. Hakluyt Society, London. 3 Vols.
- Guiot, H. 1995. Protohistoric rafts of the Society Islands. *Rapa Nui Journal* 9(1):21-23.
- Haddon, A. C. and J. Hornell. 1938. *Canoes of Oceania. Vol. 3*. Bishop Museum Special Publication 27. Hawai'i.
- Henry, T. 1962. *Tahiti aux temps anciens*. Publication de la Société des Océanistes, 1.
- Krauss, B. H. 1993. *Plants in Hawaiian Culture*. A Kolowalu Book, University of Hawaii Press, Honolulu.
- Lee, G. and E. Stasack. n.d. Spirit of Place. Petroglyphs of Hawai'i. In preparation.
- Métraux, A. 1971. *Ethnology of Easter Island*. Bishop Museum Bulletin 160 (Reprint). Honolulu.
- Poignant, R. 1968. *Oceanic Mythology: The Myths of Polynesia, Micronesia and Melanesia*. London.
- Pukui, Mary Kawena 1972. *Nānā i ke kumu* (Look to the source), Vol. I, Published by Hui Hānai, Queen Lili'uokalani Children's Center, Honolulu.
1979. *Nānā i ke kumu* (Look to the source), Vol. II, Published by Hui Hānai, Queen Lili'uokalani Children's Center, Honolulu.
1983. *Ōlelo no'eau* (Hawaiian Proverbs & Poetical Sayings), Bernice P. Bishop Museum Special Publication No. 71, Bishop Museum Press, Honolulu.
- Westervelt, W. D. 1910. Legends of Ma-ui. A Demi God of Polynesia and of his Mother Hina. *The Hawaiian Gazette*, Honolulu.

Bud Henry was born and raised in Hawai'i and adds that, by coincidence, his 'aumakua (personal or family god) is the hihimanu—eagle ray. Bud is a former US Air Force Navigator with a Masters Degree in Geography. He conducts geographic, ecological and historic research on Hawaiian, Pacific, and Asian Studies. He lives today on the edge of He'eia Fishpond at Kāne'ohe Bay.

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